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(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL];  
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **HAM, Cornelis, L., G.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(74) Agent: **WOLFS, Marc, J., M.**; Prof. Holstlaan 6,  
NL-5656 AA Eindhoven (NL).

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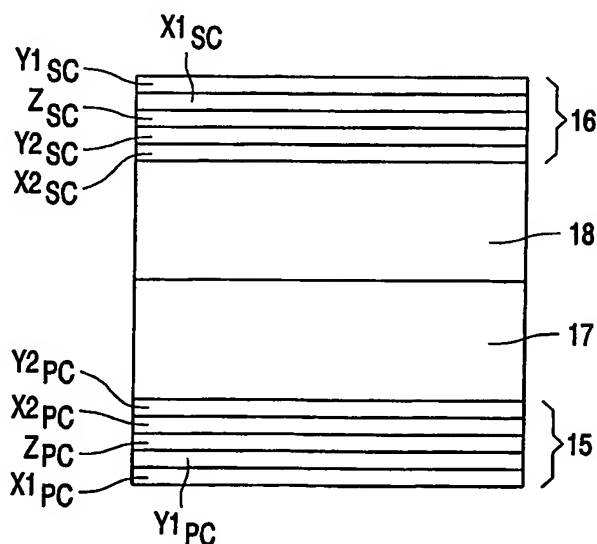
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(54) Title: **VARIABLE FIELD-OF-VIEW GRADIENT COIL SYSTEM FOR MAGNETIC RESONANCE IMAGING**



(57) Abstract: The present invention relates to a gradient coil system for magnetic resonance imaging (MRI) systems and to a magnetic resonance imaging (MRI) system comprising such a gradient coil system. Magnetic resonance imaging systems comprise at least a main magnet system, a gradient coil system, a RF system and a signal processing system. The gradient coil system according to the present invention comprises at least two X primary coil-like elements ( $X1_{pc}$ ,  $X2_{pc}$ ), at least two Y primary coil-like elements ( $Y1_{pc}$ ,  $Y2_{pc}$ ) and one Z primary coil-like element ( $Z_{pc}$ ) providing a modular gradient coil system, wherein the at least two X primary coil-like elements ( $X1_{pc}$ ,  $X2_{pc}$ ) have mutually different linearity volumes by themselves or in combination with each other, the at least two Y primary coil-like elements ( $Y1_{pc}$ ,  $Y2_{pc}$ ) have mutually different linearity volumes by themselves or in combination with each other, and the one Z primary coil-like element ( $Z_{pc}$ ) is placed between the X primary coil-like elements ( $X1_{pc}$ ,  $X2_{pc}$ ) and the Y primary coil-like elements ( $Y1_{pc}$ ,  $Y2_{pc}$ ).



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